

## **Snow Removal Policy-Snow and Ice Control Streets and Sanitation Department**

- I. The objective of snow and ice control is to combat traffic paralysis of heavy snow storms. By developing a workable emergency plan, the disruption of commercial and industrial activities can be avoided. The cost of an effective snow fighting program can be far outweighed by the avoided losses.

Snow and ice control procedures can be divided into three basic operations:

1. Material handling and application
2. Plowing
3. Loading and removing snow

Emphasis is on advance planning, equipment readiness, work crew preparedness, best use of chemical and communications including field, weather forecasting and public information.

### **II. Advance Planning**

Top street priorities are the vital thoroughfares to get to emergency services such as the hospital. These routes are all DOT maintained, but can be cleared more quickly by the Town while the state crews are concentrating on the interstates and highways. Second priority are the other primary routes in town, both state maintained and town maintained. As soon as these primary routes are cleared, the equipment moves onto the secondary, residential and side streets. These third level priorities are covered by generally following the sanitation routes in a systematic fashion. At any time that accumulations continue to affect the higher priorities, the shift supervisor will redirect the effort back to the higher priority routes. **The final priority on the list are steep, hazardous side streets.** The motor grader will be used to back up these streets as far as possible. Residents of these areas are cautioned to use other routes to avoid these hazardous areas.

The Superintendent of Streets and Sanitation is responsible for initiating the various stages of the snow and ice control plan. On a seasonal basis, preparedness begins with adequate stockpiles of salt and chat materials, salt spreader and plow preventative maintenance and replacement wear shoes, truck maintenance, chains and auxiliary lighting and work crew training. Based on forecast of snow accumulations or icing, members assigned from the streets department will load the spreader and install chains and plows to ready the primary equipment during normal working hours prior to the predicted storm.

The Town police are responsible for alerting the Superintendent and the Director of Public Works when conditions are becoming hazardous outside of normal working hours. The Superintendent may choose to initiate an initial stage of snow and ice control. The first stage involves salting and chat application. The spreader equipped dump truck is dispatched to spread

salt and chat on bridges, shaded curves and icy roadway sections prior to significant accumulation. If the storm event continues, then a “red alert” is declared by the Superintendent of Streets and Sanitation to commence around the clock snow removal. Under “red alert”, streets and sanitation employees are assigned to twelve hour shifts, 7:00 a.m. and 7:00 p.m. as posted on Attachment “A”, shift assignments.

As soon as the snow stops and clearing of the streets is completed, the Superintendent and Director must decide whether a stage three of loading and removing snow is justified. Heavy accumulations prolongs low temperatures and an extended period for melt and runoff can require that crews load and remove snow to Town owned property at Legion Drive. Top priority are areas where stored snow is hazardous to traffic. Second priority is the removal of stored snow from the on street parking on Main Street.

Personnel and equipment from other departments are assigned priorities as follows:

Water & Sewer: Unit 723 Cat 416 4 wheel drive backhoe – assigned to Public Safety Building and Town Hall parking lots and driveways.

Parks and Recreation: Unit 821 Ford tractor with scrape blade assigned to plow parks facilities and surrounding sidewalks and Ford 1 ton 4x4 with plow.

Street Department employees are assigned to shovel and deice walkways at Public Safety Building and Town Hall.

During prolonged “red alert” conditions, the Superintendent of Streets and Sanitation may request additional assignments through the department heads.

### **III. Equipment Readiness**

#### **1. Primary Equipment – Streets and Sanitation**

Unit 401, 1999 Ford 450 4x4 with snow plow.

Unit 430, 2003 Ford 1 ton 4x4 dump truck w/ plow & salt spreader

Unit 431, 2004 Ford 1 ton 4x4 dump truck w/ plow & salt spreader

Unit 405, 2005 Ford 1 ton 4x4 dump truck w/ plow & salt spreader

Chains are provided for all plow equipment. Auxiliary head lights are required because of the plow blade blocks normal truck lights. Warning lights are necessary so that the relatively slow moving trucks or motor grader will be visible in the snow storm. Truck mounted plows are equipped with replaceable wear edges of rubber or urethane to reduce chances for damage from manholes. The motor grader is not equipped with rubber blades and experienced operators using extreme caution must be employed.

#### **2. Secondary Equipment**

Unit 423, 1991/916 Cat front end loader: loads salt and chat used for loading and removing snow

Unit 411, 1997 International Flat bed

(2) – 1995 Ford 2 ton 14' flat bed dumps

Unit 440, Ford 4x4 555-E backhoe

#### Water and Sewer

Unit 723, Cat 416 4 wheel drive backhoe

#### Parks and Recreation

Unit 821, 2910 Ford tractor

F350 1 Ton with Front End Blade Attachment

#### 3. Supplemental Equipment

For light snow removal, truck mounted blade type plows are adequate. For heavier snowfalls, large blade motor graders are available from contractors for rental with operators. The Town's Purchasing Agent will be contacted to procure these services as needed. Currently on the list:

WNC Paving, motor grader

Wolfpen Associates, motor grader

#### **IV. Material Handling and Application**

The Town uses both abrasives (chat) and salt. The best use of these materials are subject to many variables such as traffic, temperature, sunshine, stored heat in the pavement and adequate forecasting of weather conditions and changes. How satisfactorily and economically results are achieved depends on the staff's skill on tailoring operations and concerns to the conditions.

Chat is cheap to buy, offers immediate traction on slippery surfaces and offers visible evidence of action by town crews (an important psychological advantage to the driver and the town's public relations program). Significant disadvantages are low miles of coverage per truck load (thus requiring much reloading and dead hauling of empty trucks), dirty, hard on car windshields and finishes and generation of an appreciable cleanup job following the storm's end.

The use of salt can damage nearby salt sensitive vegetation and infiltrate ground water. When applied as dry rock salt, it stays in place on loose slush but segregates, bounces off and slides side on ice. Salt is dormant when applied and slow to embed at temperatures of 20 F or less.

Therefore, traffic may cause considerable loss.

The use of abrasives and salt as a snow and ice control procedure is to be minimized to conserve the environment and control costs.

An important element of the material handling plan is storage. The Town's storage at 129 Legion Drive is an excellent central site to reduce hauling distances and to speed spreading operations. Chat is stored in an open treated timber bin. Salt is stored under an inexpensive lean to shed built of treated posts and timbers for long life. An asphalt pad is provided as a base to pile the material and sloped to provide drainage. Bulk chemicals are used due to lower initial cost and easy storage versus bagged material. Proper storage is required to reduce loss, avoid

contamination and to expedite emergency operations. The effectiveness of the material is reduced when moisture causes salt to cake and become unworkable. The size of the Town's storage is adequate to allow purchase will in advance.

**V. Plowing**

It is standard practice to plow the roadways out to the curb line or outer edge of the shoulder. By plowing out the shoulder edge and storing snow in ditches and other parts of the roadside, provision is made for drainage from the pavement. In the Main Street area, on street parking lanes and side street parking areas such as Miller Street are used for snow storage. Complete removal of surface water from thawing snow and ice from the pavement is important to protect the roadway support and minimize hazards from refreezing. The Town is not responsible for removing snow plowed driveways.

**VI. Loading and Removing Snow**

The weather in our area is generally a continuous progression of air masses resulting in relatively short periods of snow cover before melt and runoff. Only in the case of an unusually heavy accumulation and a prolonged period of freezing temperatures should the costs of loading and removing snow be necessary.

**VII. Public Information**

The Town Clerk will assist the Superintendent with informing the radio and print media of scheduled changes affecting sanitation pickups as well as Town Hall hours.

**VIII. Reports**

On the first day following a return to normal working hours, the Director of Public Works, Superintendent, shift supervisors, Public Works Assistant and Purchasing Director will meet to review how well the plan worked and what can be done better. The Public Works Assistant and Purchasing Director will meet to review how well the plan worked and what can be done better. The Public Works Assistant will take notes and make any revisions to the plan needed. The Public Works Assistant will prepare a report of daily weather conditions, high and low temperatures and road conditions. The use of salt and chat materials will be estimated. Overtime hours will be determined. Expenditures on equipment rentals recorded. Note any incidence of injury, accident or equipment failure. Note the impact of refuse collection schedules and any other comments for the record. Purchase requisitions shall be written as needed to restock materials or supplies.

## **ATTACHMENT A**

### **Snow and Ice Control Plan Shift Assignments**

#### **Day (7:00 a.m.-7:00 p.m.)**

Streets and Sanitation Supervisor

Crew Leader

#### **Night (7:00 p.m.-7:00 a.m.)**

Crew Leader

Two Streets and Sanitation Workers

#### **Backups**

2-4 Streets and Sanitation Workers